

WHAT IS CLAIMED IS:

1. An imaging apparatus comprising:

a solid-state imaging element having a structure in which a large number of pixel cells each comprised of a combination of a main photosensitive pixel having a relatively large area and a dependent photosensitive pixel having a relatively small area are arranged according to a predetermined arrangement form, and a signal based on a signal charge photoelectrically converted with said main photosensitive pixel and a signal based on a signal charge photoelectrically converted with said dependent photosensitive pixel can be selectively acquired;

an imaging signal acquirement controlling device which performs control to acquire an imaging signal from said solid-state imaging element;

a main black level correction value determining device which determines a black level correction value of the main photosensitive pixel based on a signal obtained from said main photosensitive pixel;

a dependent black level correction value determining device which determines a black level correction value of the dependent photosensitive pixel by calculation from the black level correction value of the main photosensitive pixel determined by said main black level correction value determining device; and

a black level correcting device which performs black level correction of the imaging signal acquired from said main photosensitive pixel based on the black level correction value of the main photosensitive pixel determined by said main black level correction value determining device, and performs black level correction of the imaging signal acquired from said dependent photosensitive pixel based on the dependent photosensitive pixel determined by said dependent black level correction value determining device.

2. The imaging apparatus according to claim 1, wherein said solid-state imaging element comprises a photosensitive pixel portion being an effective pixel area, and a light-blocking pixel portion which is provided at a predetermined position other than said effective pixel area and in which the light-receiving surface of said pixel cell is blocked from light, and

said main black level correction value determining device calculates a black level correction value of a main photosensitive pixel belonging to said photosensitive pixel portion based on a signal acquired from a main photosensitive pixel belonging to said light-blocking pixel portion.

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3. The imaging apparatus according to claim 2, wherein said imaging signal acquirement controlling device does not perform control to acquire an imaging signal from a dependent photosensitive pixel in said light-blocking pixel portion.

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4. The imaging apparatus according to claim 1, wherein the black level correction value of said dependent photosensitive pixel is calculated by multiplying the black level correction value of said main photosensitive pixel by a ratio of the cell area of said main photosensitive pixel to the cell area of said dependent photosensitive pixel.

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5. The imaging apparatus according to claim 2, wherein the black level correction value of said dependent photosensitive pixel is calculated by multiplying the black level correction value of said main photosensitive pixel by a ratio of the cell area of said main photosensitive pixel to the cell area of said dependent photosensitive pixel.

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6. The imaging apparatus according to claim 3, wherein the black level correction value of said dependent photosensitive pixel is calculated by multiplying the black level correction value of said main photosensitive pixel by a ratio of the cell area of said main photosensitive pixel to the cell area of said dependent photosensitive pixel.